National Forum on Vapor Intrusion Risk Management Session

Case Study – Bally Ground Water Superfund Site


Bally

Bally Site - History

Bally Case and Cooler

- 1930's – High quality wooden cabinets and cedar chests
- 1950's – Insulated meat display cases (insulated with fiberglass batting, but experiments with urethane foam)
- 1960's – Meat display cases, and walk-in freezers (urethane foam, degreasing solvents)
- 1995 – Closed facility

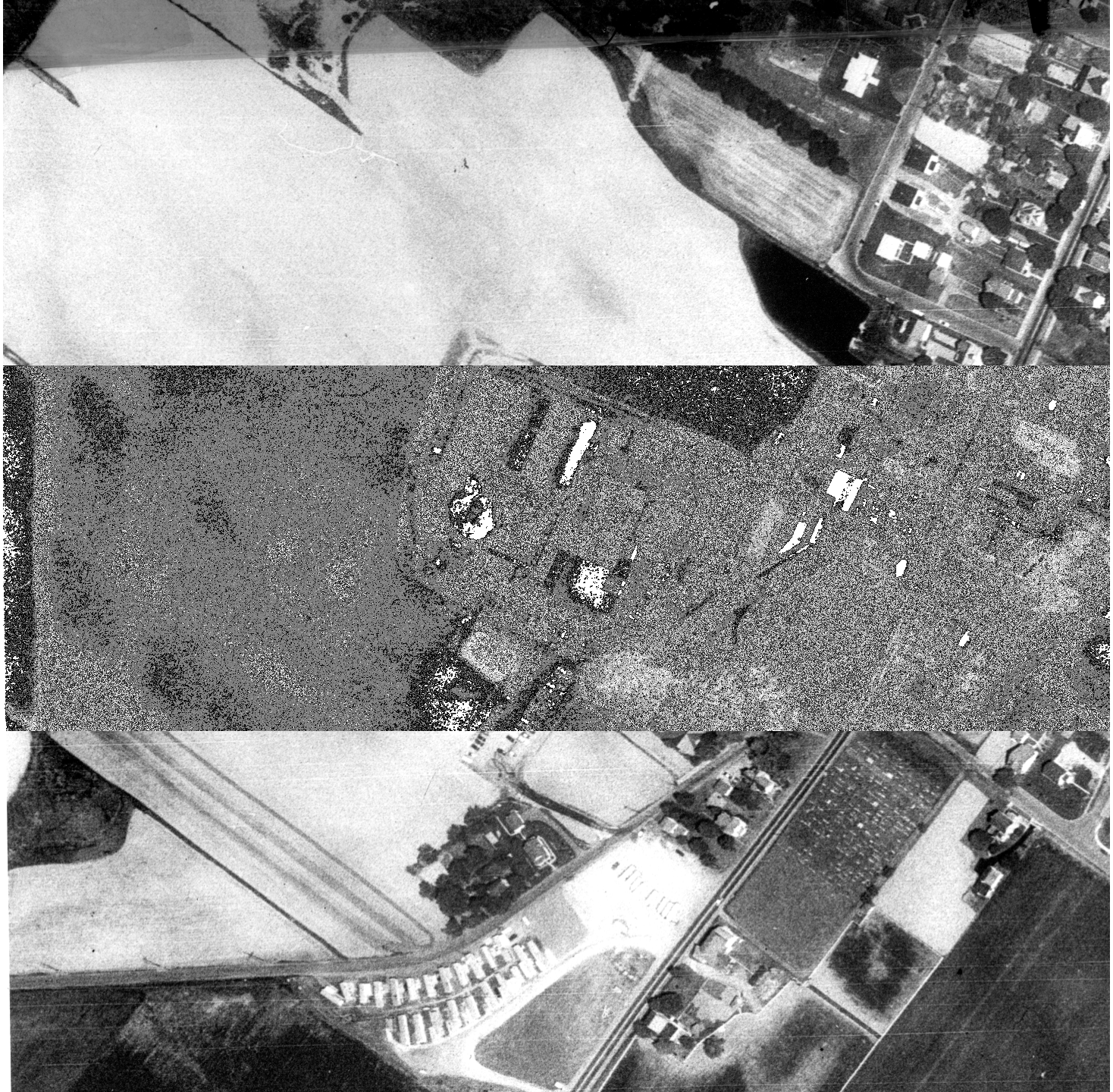
Reading Terminal, PA (2009)

Bally – Solvent History

- Solvent releases early 1960's (urethane foam insulation) to 1969 (end of manufacture of meat display cases, source areas)

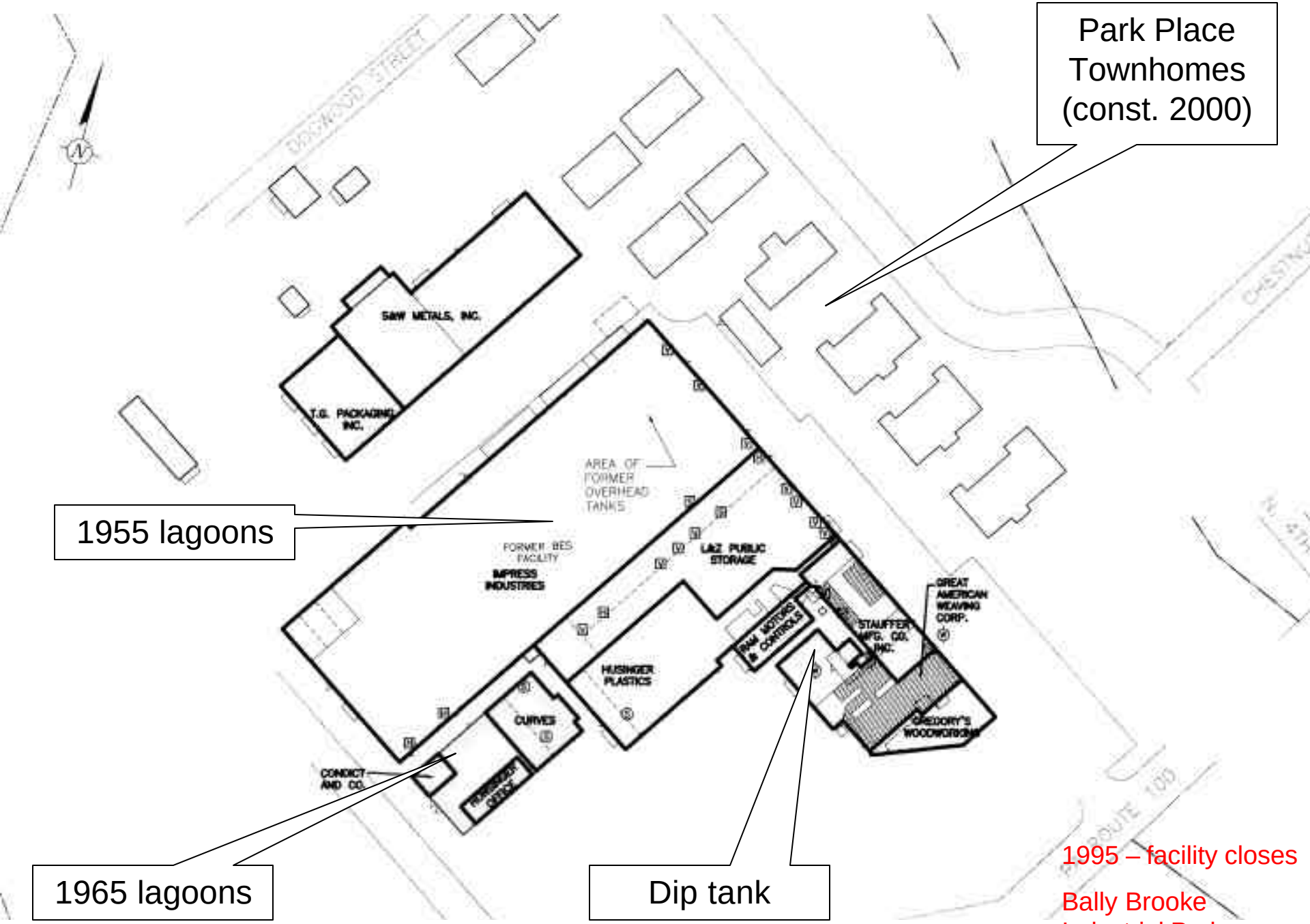
- Probable sources of TCE:
  - 2,0000-gallon dip tank for meat display cases
  - Four shallow waste water lagoons

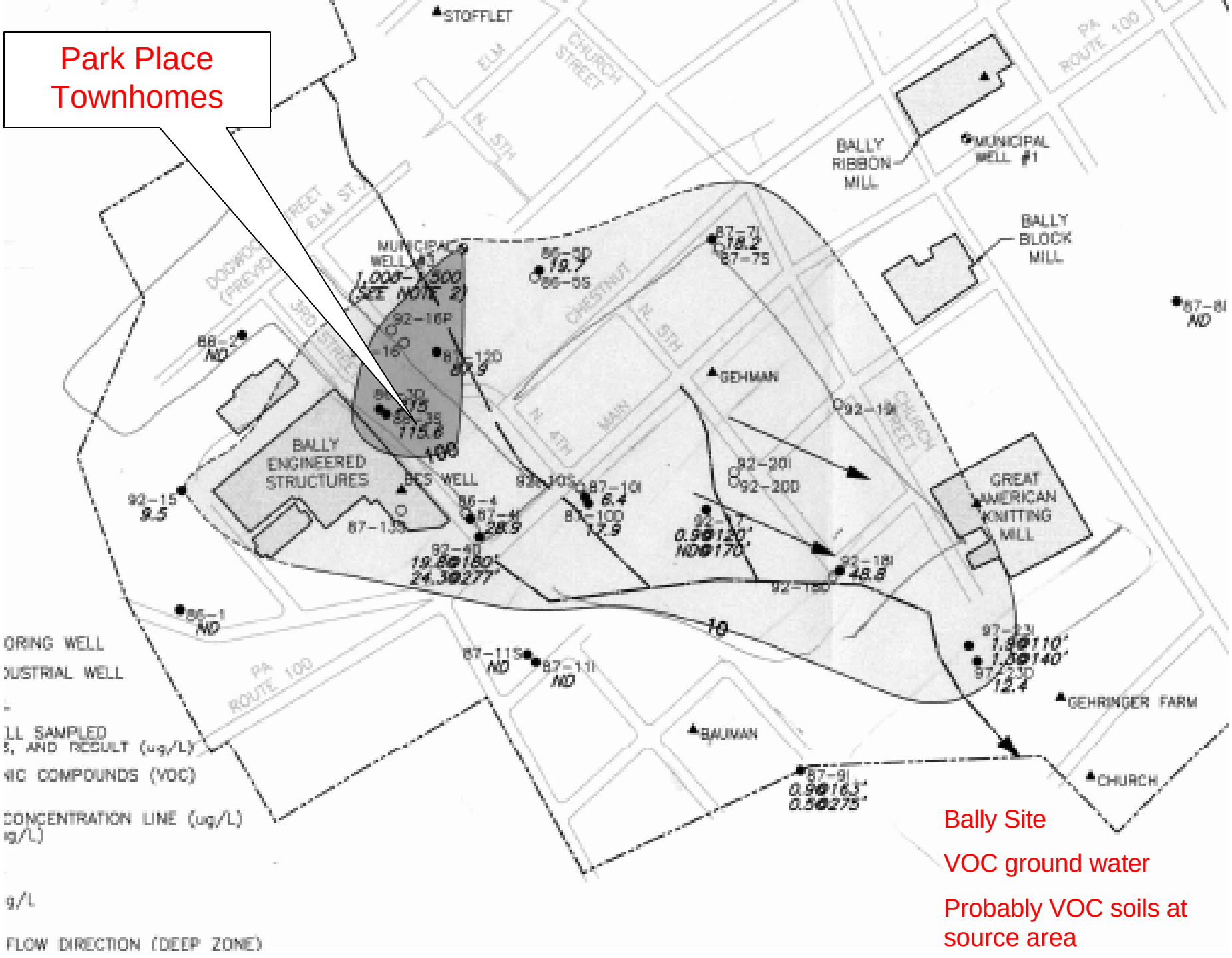
1955



1965

1975


Park Place Townhomes (const. 2000)
1955 lagoons
1965 lagoons
Dip tank
1995 – facility closes
Bally Brooke Industrial Park
DESMOND STREET
S&W METALS, INC.
T.G. PACKAGING INC.
AREA OF FORMER OVERHEAD TANKS
FORMER BES FACILITY
IMPRESS INDUSTRIES
L&Z PUBLIC STORAGE
HUSINGER PLASTICS
RAM MOTORS & CONTROLS
STAUFFER MFG. CO. INC.
GREAT AMERICAN WEAVING CORP.
GREGORY'S WOODWORKING
CURVES
CONDICT AND CO.
ROUTE 100



Bally Site

VOC ground water

Probably VOC soils at source area

Bally - Vapor Intrusion

Areas of Concern	Current potential receptor	Method of Investigation	Subslab results (TCE, ug/m^3)	Indoor air results (TCE, ug/m^3)	Outcome
1955 lagoons	Commercial/ Industrial	Subslab and indoor air samples	180 – 4,200,000	40 – 490** CR >1E-4 HI >1	Mitigation
1965 lagoons	Commercial/ Industrial	Subslab and indoor air samples	1.3 – 9.1	2.9 – 4.0 CR <1E-4 HI <1	No further action
Dip tank	Commercial/ Industrial	Subslab and indoor air samples	4,200 – 110,000	0.35 – 2.5 CR <1E-4 HI <1	Monitoring
Park Place townhomes	Residential	Subslab samples (38/41 townhomes sampled)	Non-detect – 5.1*	Not collected	No further action

*133 samples; 129<1 ug/m^3, 3 samples <2 ug/m^3, 1 sample was 5.1 (other two samples at that house were 0.22 and 01.8 ug/m^3).

**2009 OSWER TCE guidance – cancer risk 3 to 8E-5, but non-cancer risk probably unacceptable (CNS, liver, kidney)

Bally – Lessons learned

- Subslab is high value sample
- Historical evaluation very useful for reused industrial Sites (multiple lines of evidence)
- Outcome not foregone conclusion

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